Proximal Tibial / Distal Femoral Osteotomy Rehabilitation Protocol

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This protocol provides general guidelines for rehabilitation following proximal tibial / distal femoral osteotomy. Progression should be individualized based on the procedure, healing, and patient response, with modifications as directed by the surgeon.

Phase	Goals	Precautions / Restrictions	Treatment

Weeks 0 – 6	● **Protect surgical site**
	● Full ROM
	● Reduce muscle atrophy
	● Reduce swelling
	● Decrease pain and inflammation
		● ROM: Progressive as tolerated
		● TWB with the knee in full extension using crutches
		● Immobilizer **must be on at all times when walking**
			General guidelines
			● PRICE
			  ● Cryotherapy: 5-7 times per day
			  ● Compression with TubiGrip/TEDS
			● ROM: Gradual, progressive
			  ● Heel slides
			  ● Patella mobilizations
			● Quadriceps recruitment
			● Global LE and proximal hip musculature activation/strengthening
			● Gait training with crutches
			Initial Visit
			● FOTO, LEFS

Weeks 6 – 12	● Discontinue knee immobilizer
	● Full ROM
	● Reduce atrophy/progress strengthening
	● Reduce swelling
	● **Normalize gait**
	● SLR without extensor lag
		● Progress to WBAT
		  ● Week 6: 1/3 body weight
		  ● Week 7: 2/3 body weight
		  ● Week 8: Full body weight with assistive device
		  ● Week 9+: Full body weight without assistive device
		● **No jogging or sport activity**
		● **Avoid painful activities/exercises**
			General guidelines
			● ROM: As tolerated
			● Gait training with/without assistive device
			● Core stabilization exercises
			● Neuromuscular re-education
			● Global LE strengthening
			  ● Limit knee flexion angles **0-60 degrees**
			  ● Begin functional strengthening exercises (bridge, mini-squat, step up, etc)
			● Double limb to single limb balance/proprioception
			● Aerobic training:
			  ● Alter-G treadmill walking
			  ● Pool, once all incisions healed
			  ● Stationary bike
			Week 6
			● FOTO, LEFS

Weeks 12 - 16	● **No effusion**
	● Full ROM
	● Increase functional LE strength
	● Return to activity as tolerated
		● Progressive loading at greater knee flexion angles
		● **No jogging or sport activity**
		● **Avoid painful activities/exercises**
			General guidelines
			● Aerobic training
			  ● Begin **non-impact aerobic training (elliptical / stairmaster)**
			● Increase loading capacity for lower extremity strengthening exercises
			● Continue balance/proprioceptive training
			● Aerobic training:
			  ● Alter-G treadmill walk/jog
			  ● Pool, once all incisions healed
			  ● Stationary bike/elliptical/stairmaster

Phase	Goals	Precautions / Restrictions	Treatment
			Week 12 ● FOTO, LEFS
Weeks 16+	● Full ROM ● Functional strengthening ● Initiate return to jogging/running program ● Initiate basic plyometrics ● Return to sport/activity	● **No jogging until week 16 and cleared by surgeon** ● **No jogging on painful or swollen knee** ● **No intensive plyometric exercises until week 20 and cleared by surgeon** ● Return to sport 6-8 months post-op **with surgeon approval**	**General guidelines** ● Gradually increase lifting loads focusing on form, control, and tissue tolerance ● Progress as tolerated: ROM, Strength, Endurance, Proprioception/Balance, agility, Sport specific skills **Week 16** ● begin return to jogging/running program with MD clearance ● FOTO, LEFS **Week 20** ● begin higher level plyometric and agility training with surgeon clearance